

Chemistry 11: Writing Compound Names

- We are now going in the opposite direction.
- You will be given a Chemical formula and you are asked to write the appropriate chemical name.
- Similarly, there will be 4 different types of compound formulas which will have a specific set of rules to write the name.

1) Simple Ionic Compounds with no multivalent metals, and no polyatomics.

e.g $\text{ZnCl}_2 =$

Steps:

- 1) Divide the formula into 2.
- 2) Simply name the metal ion first.
- 3) Name the non-metal ion second, but change the ending to “ide” (mostly 2 syllables except for iodide.)

Answer: $\text{ZnCl}_2 =$ **zinc chloride**

Try this one: $\text{K}_2\text{O} =$

2) Ionic compounds with a polyatomic.

- You can recognize that there is a polyatomic by looking for brackets or more than 2 symbols.

$\text{Ag}_2\text{SO}_4 =$ (I see 3 symbols in the formula)

- Same rules apply. However, if the 2nd part is a polyatomic do not change the ending to “ide”. Instead, just write the name of the polyatomic.

Answer: $\text{Ag}_2\text{SO}_4 =$ **silver sulphate**

Try this one: $\text{Al}_2(\text{SO}_4)_3 =$

3) Ionic compounds with a multivalent metal.

- You must always check if the 1st metal ion is a multivalent metal.
- If this is the case, you must add a roman numeral to the right of the metal's name.

e.g. $\text{PbO}_2 =$

- Pb (lead) is a multivalent metal.
- Use **reverse criss cross**. (subscripts become superscripts of the other symbol. The superscripts will represent the ion charges.)

$\text{Pb}^{+2} \text{O}^{-1}$ (Now check if the negative ion charge is accurate. If not multiple to make it correspond the actual ion charge. You must however multiple the positive ion charge by the same number.

$\text{Pb}^{+2 \times 2 = +4}, \text{O}^{-1 \times 2 = -2}$ (The ion charge of the multivalent becomes the roman numeral)

Answer: $\text{PbO}_2 =$ **lead (iv) oxide**

Try this one: $\text{Fe}_2(\text{HPO}_4)_3 =$

4) Covalent compounds

e.g $\text{P}_2\text{S}_3 =$

- **Prefix naming system.**
- Prefixes are assigned to represent the subscripts for both 1st and 2nd atom.
- Mono is not used for the 1st atom.
- 2nd atom ends in "ide".

Answer: $\text{P}_2\text{S}_3 =$ diphosphorus trisulphide

Try this one: $\text{SO} =$

Homework assignment due at the beginning of next period:
ws: Chemical Names (odd numbers)